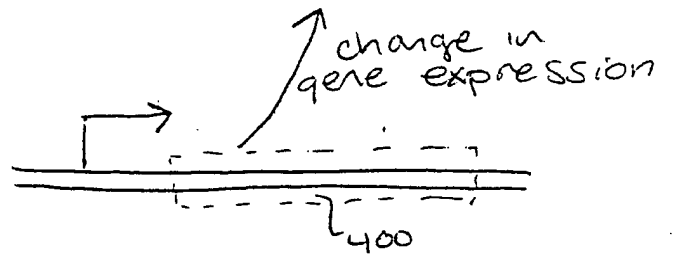change in
gene expression

+

400

detection of change
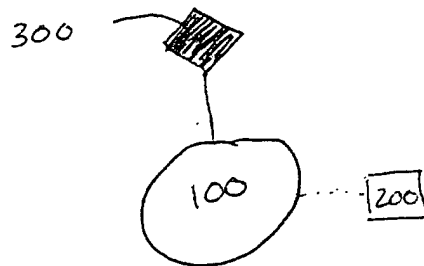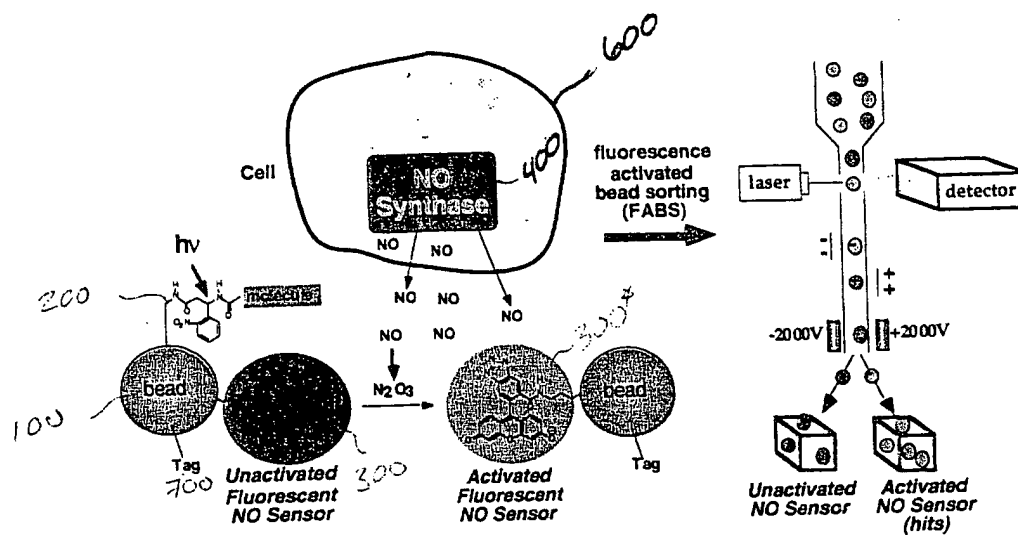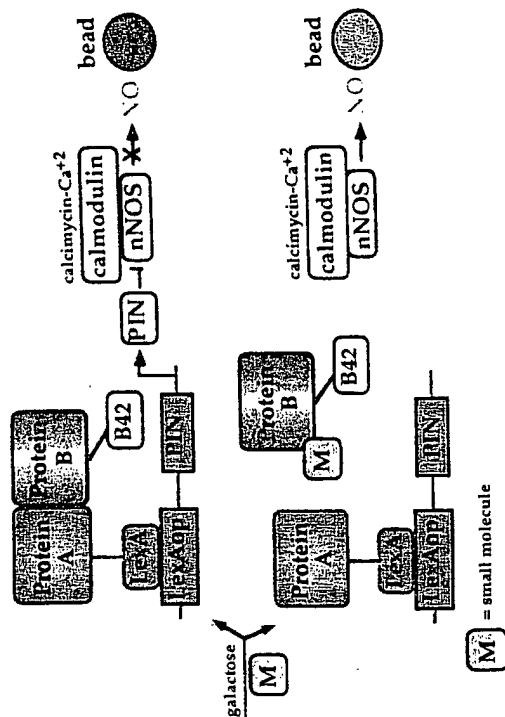or amount of
reporter gene product

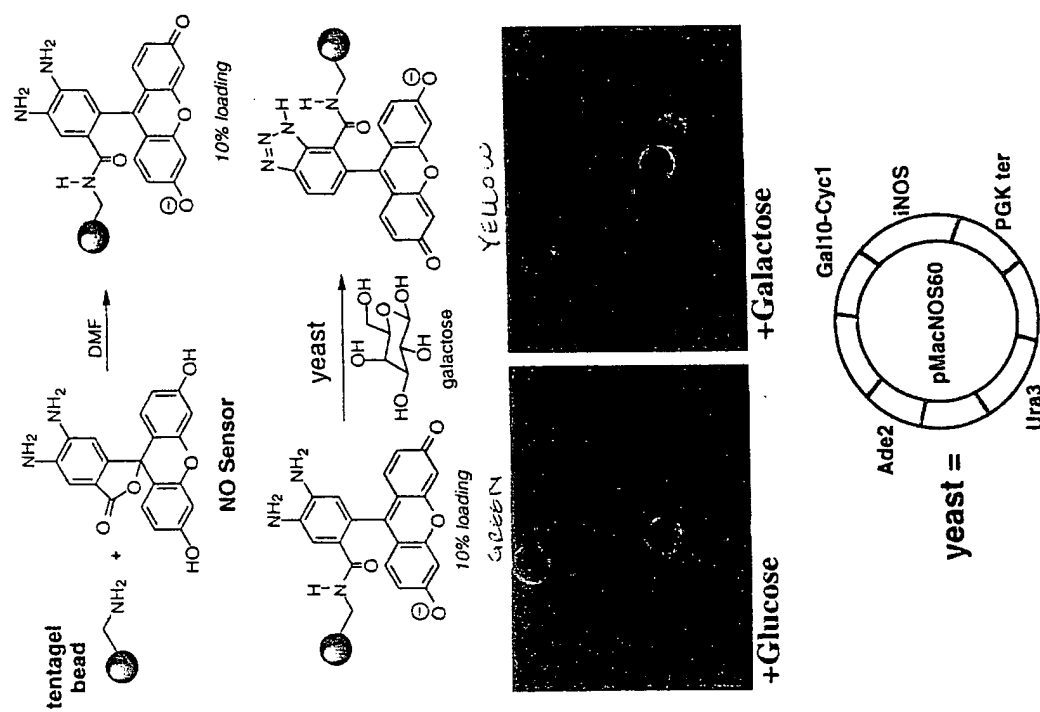300

100

200

FIGURE 1

Figure 2

Scheme I. Rapid Automated Screening of Small Molecule Libraries Using NO.

Figure 3

Scheme II. Discovery of Small Molecule Inhibitors of Protein-Protein Interactions.

Figure 4 --- 1 5 000 #

tentagel
bead

NH₂

NH₂

+

NH₂

DMF

NO Sensor

10% loading

NH₂

NH₂

yeast

galactose

GREEN

10% loading

YELLOW

+Glucose

+Galactose

Gal10-Cyc1

iNOS

pMacNOS60

Ade2

PGK ter

Ura3

yeast =

Scheme III. NO-Based Detection of Small Molecule Initiated Transcription.

Figure 5

Stimulatory
Cytokines
(IFN-γ, LPS)

cytosol

iκB

NFκB

nitric oxide

[·NO]

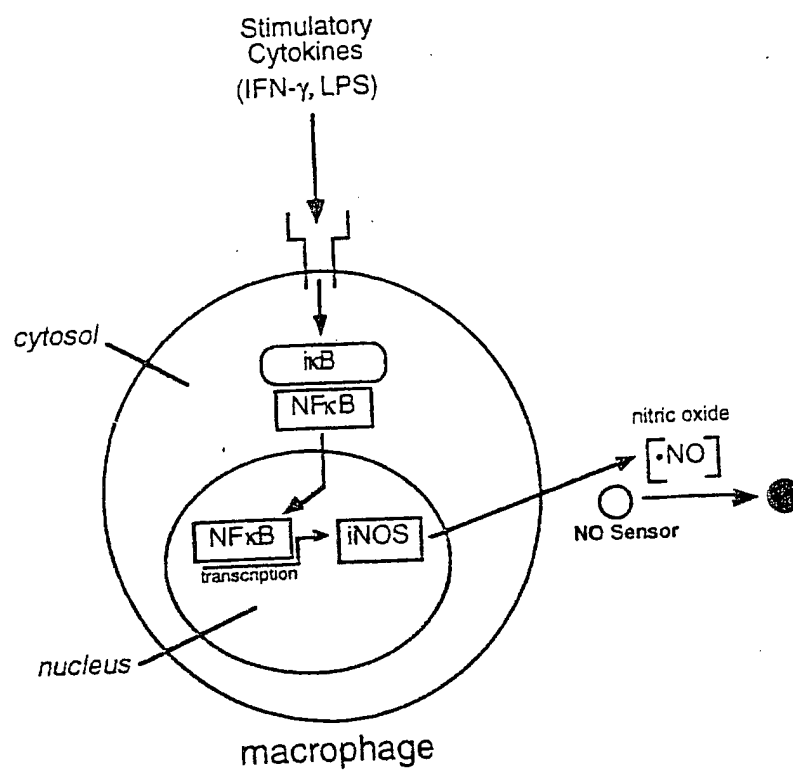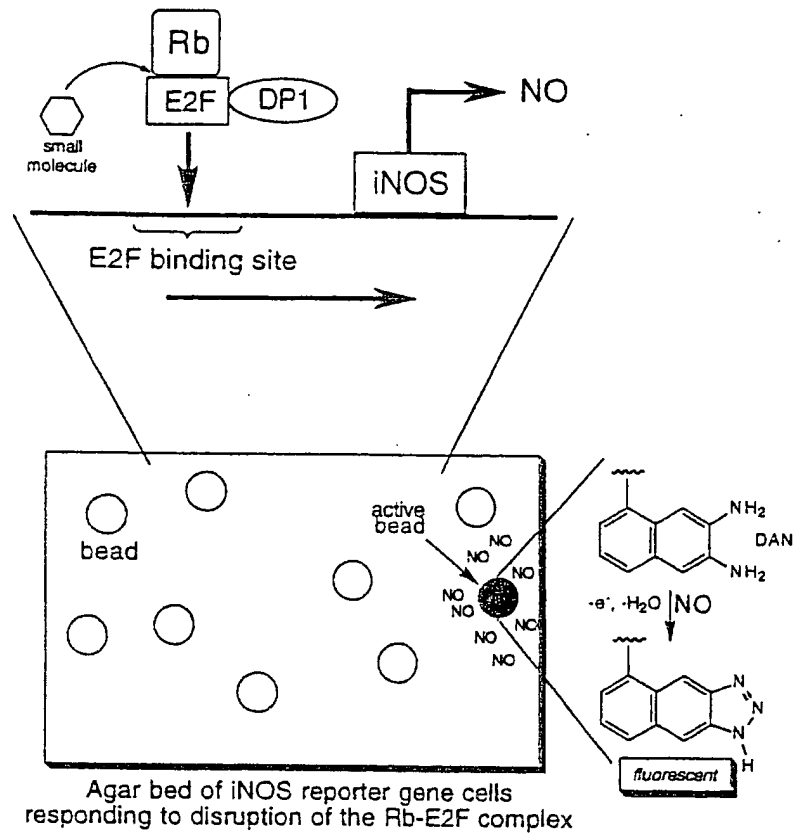NFκB → iNOS
transcription

NO Sensor

nucleus

macrophage

Figure 6

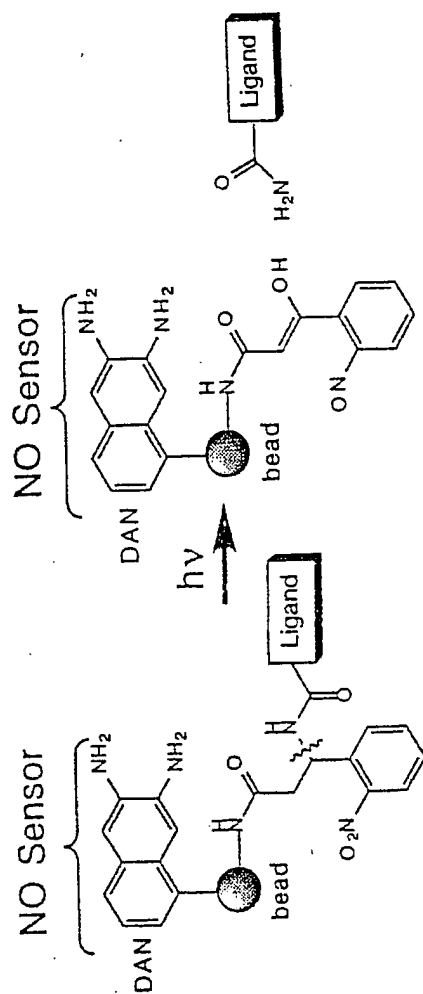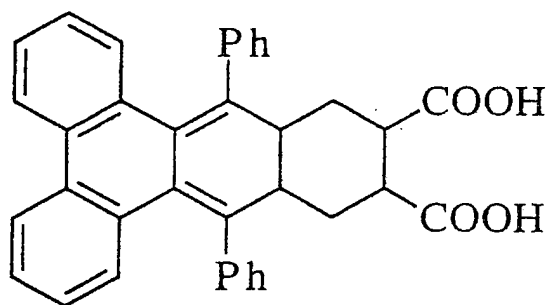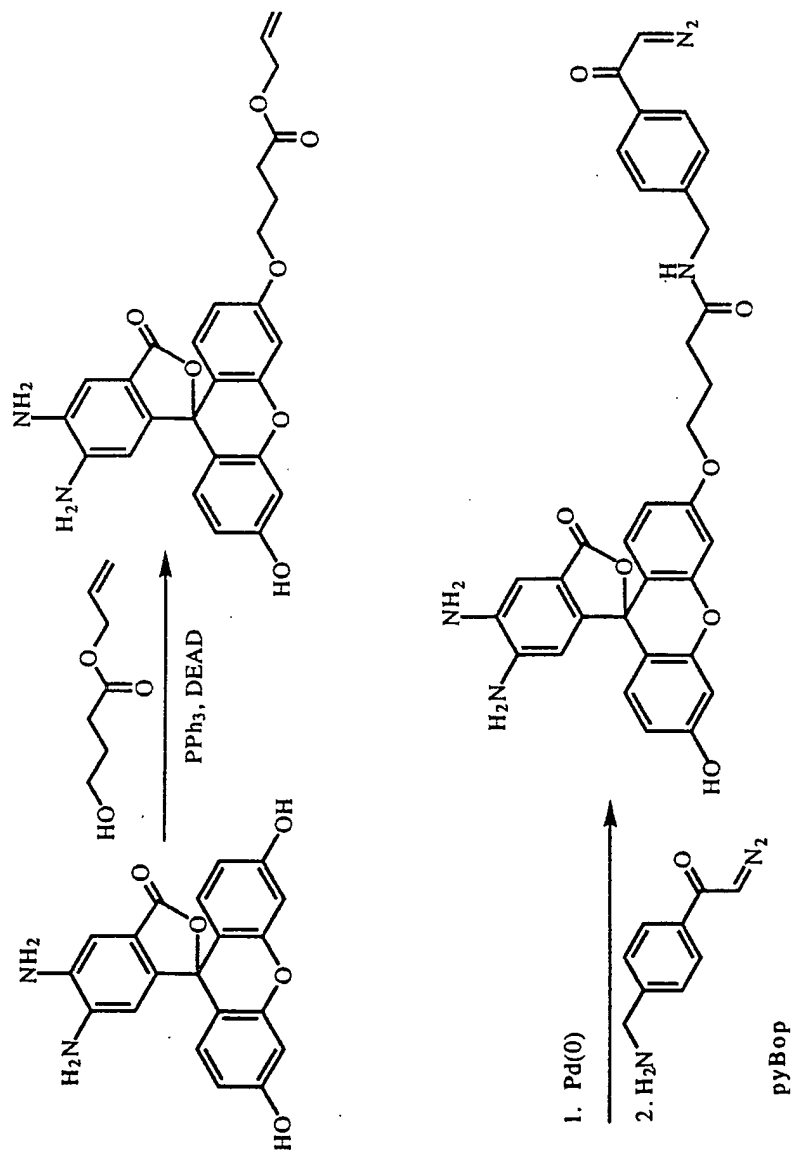Scheme 3. A high-throughput assay design based on screening for small molecules which disrupt the Rb-E2F/DP1 complex.
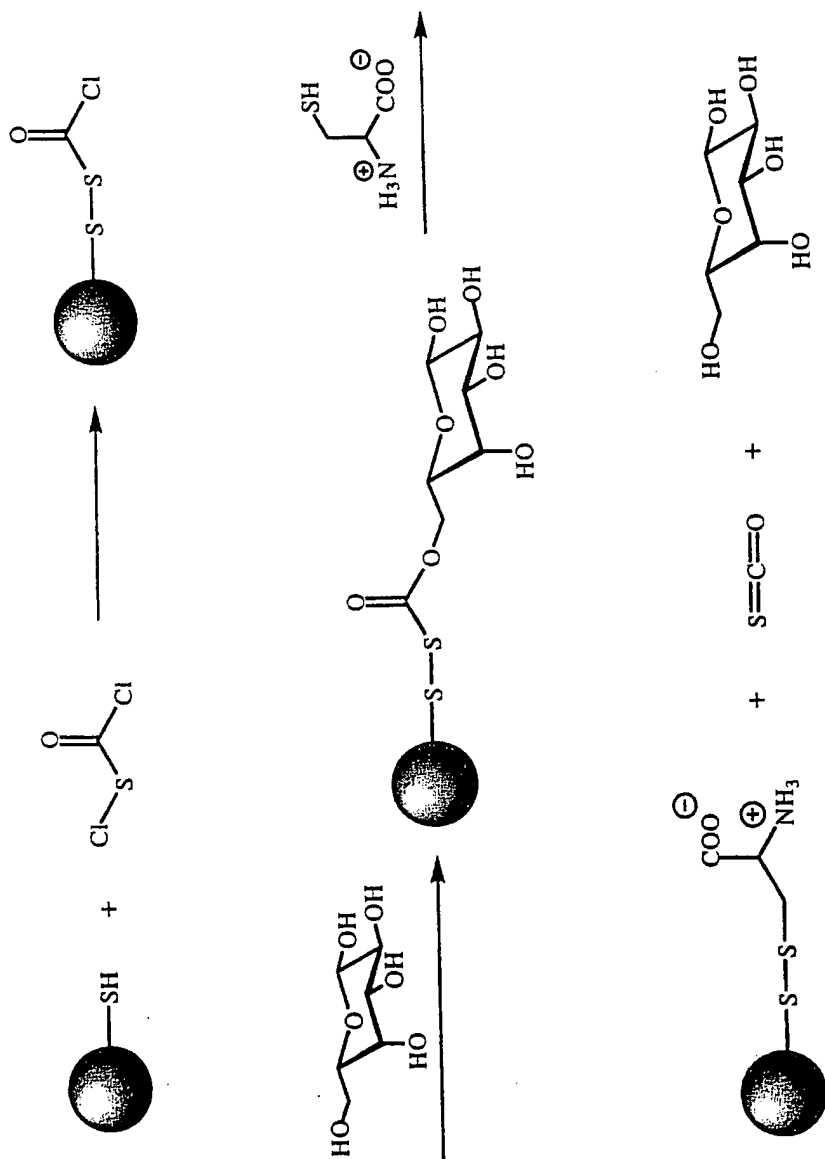
Figure 7

Figure 8

Figure 9

Figure 10

Figure 11